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SEQUENCE LISTING

<110> RALPH, DAVID  
AN, GANG  
O'HARA, S. MARK  
VELTRI, ROBERT W.

RECEIVED

NOV 08 2002

TECH CENTER 1600/2900

B. <120> DIAGNOSIS OF DISEASE STATE USING MRNA PROFILES IN  
PERIPHERAL LEUKOCYTES

<130> UROC:014USD1

<140> 09/660,568

<141> 2000-09-11

<150> 60/041,576

<151> 1997-03-24

<150> PCTUS97/22105

<151> 1997-12-05

<150> 60/032,619

<151> 1996-12-06

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<170> PatentIn Ver. 2.1

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<223> Description of Artificial Sequence: Synthetic  
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<223> Description of Artificial Sequence: Synthetic  
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<210> 27

<211> 21

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<223> Description of Artificial Sequence: Synthetic  
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<210> 28

<211> 19

<212> DNA

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
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<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
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Leu Arg Ile Asp Leu Glu Arg Leu Gln Cys Leu Asn Glu Ser Arg Glu  
 35 40 45

Gly Ser Gly Arg Gly Val Phe Lys Pro Trp Glu Glu Arg Thr Asp Arg  
 50 55 60

Ser Lys Phe Ile Glu Ser Asp Ala Asp Glu Glu Leu Leu Phe Asn Ile  
 65 70 75 80

Pro Phe Thr Gly Asn Val Lys Leu Lys Gly Ile Ile Ile Met Gly Glu  
 85 90 95

Asp Asp Asp Ser His Pro Ser Glu Met Arg Leu Tyr Lys Asn Ile Pro  
 100 105 110

Gln Met Ser Phe Asp Asp Thr Glu Arg Glu Pro Asp Gln Thr Phe Ser  
 115 120 125

Leu Asn Arg Asp Leu Thr Gly Glu Leu Glu Tyr Ala Thr Lys Ile Ser  
 130 135 140

Arg Phe Ser Asn Val Tyr His Leu Ser Ile His Ile Ser Lys Asn Phe  
 145 150 155 160

Gly Ala Asp Thr Thr Lys Val Phe Tyr Ile Gly Leu Arg Gly Glu Trp  
 165 170 175

Thr Glu Leu Arg Arg His Glu Val Thr Ile Cys Asn Tyr Glu Ala Ser  
180 185 190

Ala Asn Pro Ala Asp His Arg Val His Gln Val Thr Pro Gln Thr His  
195 200 205

Phe Ile Ser  
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<210> 32

<211> 157

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
Peptide

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Phe Lys Pro Trp Glu Glu Arg Thr Asp Arg Ser Lys Phe Ala Glu Ser  
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Asp Ala Asp Glu Glu Leu Leu Phe Asn Ile Pro Phe Thr Cys Asn Val  
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Lys Leu Lys Gly Val Ile Ile Met Gly Glu Asp Asp Asp Ser His Pro  
35 40 45

Ser Glu Met Arg Leu Tyr Lys Asn Ile Pro Gln Met Ser Phe Asp Asp  
50 55 60

Thr Glu Arg Glu Pro Glu Gln Thr Phe Ser Leu Asn Arg Asp Ile Thr  
65 70 75 80

Gly Glu Leu Glu Tyr Ala Thr Lys Ile Ser Arg Phe Ser Asn Val Tyr  
85 90 95

His Leu Ser Ile His Ile Ser Lys Asn Phe Gly Ala Asp Thr Thr Lys  
100 105 110

Ile Phe Tyr Ile Gly Leu Arg Gly Glu Trp Thr Glu Leu Arg Arg His  
115 120 125

Glu Val Thr Ile Cys Asn Tyr Glu Ala Ser Ala Asn Pro Ala Asp His  
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Arg Val His Gln Val Thr Pro Gln Thr His Phe Ile Ser  
145 150 155

<210> 33

<211> 207

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 33

Cys Ser His Gly His Ser His Asn Cys Ala Ala Glu His Ile Pro Glu  
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Val Pro Gly Asp Asp Val Tyr Arg Tyr Asp Met Val Ser Tyr Ile Asp  
20 25 30

Met Glu Lys Val Thr Thr Leu Asn Glu Ser Val Asp Gly Ala Gly Lys  
35 40 45

Lys Val Phe Lys Val Met Glu Lys Arg Asp Asp Arg Leu Glu Tyr Val  
50 55 60

Glu Ser Asp Cys Asp His Glu Leu Leu Phe Asn Ile Pro Phe Thr Gly  
65 70 75 80

His Val Arg Leu Thr Gly Leu Ser Ile Ile Gly Asp Glu Asp Gly Ser  
85 90 95

His Pro Ala Lys Ile Arg Leu Phe Lys Asp Arg Glu Ala Met Ser Phe  
100 105 110

Asp Asp Cys Ser Ile Glu Ala Asp Gln Glu Ile Asp Leu Lys Gln Asp  
115 120 125

Pro Gln Gly Leu Val Asp Tyr Pro Leu Lys Ala Ser Lys Phe Gly Asn  
130 135 140

Ile His Asn Leu Ser Ile Leu Val Asp Ala Asn Phe Gly Glu Asp Glu  
145 150 155 160

Thr Lys Ile Tyr Tyr Ile Gly Leu Arg Gly Glu Phe Gln His Glu Phe  
165 170 175

Arg Gln Arg Ile Ala Ile Ala Thr Tyr Glu Ser Arg Ala Gln Leu Lys

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<212> DNA

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<223> Description of Artificial Sequence: Synthetic  
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<223> Description of Artificial Sequence: Synthetic Peptide

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Arg	Glu	Leu	Ser	Tyr	Pro	Lys	Asn	Glu	Ser	Phe	Asn	Asn	Gln	Ser	Arg
			20					25					30		
Arg	Ser	Ser	Ser	Gln	Lys	Ser	Lys	Thr	Phe	Asn	Lys	Met	Pro	Pro	Gln
			35				40					45			
Arg	Gly	Gly	Gly	Ser	Ser	Lys	Leu	Phe	Ser	Ser	Ser	Phe	Asn	Gly	Gly
			50			55					60				
Arg	Arg	Asp	Glu	Val	Ala	Glu	Ala	Gln	Arg	Ala	Glu	Phe	Ser	Pro	Ala
			65			70				75				80	

Gln	Phe	Ser	Gly	Pro	Lys	Lys	Ile	Asn	Leu	Asn	His	Leu	Leu	Asn	Phe	85	90	95	
Thr	Phe	Glu	Pro	Arg	Gly	Gln	Thr	Gly	His	Phe	Glu	Gly	Ser	Gly	His	100	105	110	
Gly	Ser	Trp	Gly	Lys	Arg	Asn	Lys	Trp	Gly	His	Lys	Pro	Phe	Asn	Lys	115	120	125	
Glu	Leu	Phe	Leu	Gln	Ala	Asn	Cys	Gln	Phe	Val	Val	Ser	Glu	Asp	Gln	130	135	140	
Asp	Tyr	Thr	Ala	His	Phe	Ala	Asp	Pro	Asp	Thr	Leu	Val	Asn	Trp	Asp	145	150	155	160
Phe	Val	Glu	Gln	Val	Arg	Ile	Cys	Ser	His	Glu	Val	Pro	Ser	Cys	Pro	165	170	175	
Ile	Cys	Leu	Tyr	Pro	Pro	Thr	Ala	Ala	Lys	Ile	Thr	Arg	Cys	Gly	His	180	185	190	
Ile	Phe	Cys	Trp	Ala	Cys	Ile	Leu	His	Tyr	Leu	Ser	Leu	Ser	Glu	Lys	195	200	205	
Thr	Trp	Ser	Lys	Cys	Pro	Ile	Cys	Tyr	Ser	Ser	Val	His	Lys	Lys	Asp	210	215	220	
Leu	Lys	Ser	Val	Val	Ala	Thr	Glu	Ser	His	Gln	Tyr	Val	Val	Gly	Asp	225	230	235	240
Thr	Ile	Thr	Met	Gln	Leu	Met	Lys	Arg	Glu	Lys	Gly	Val	Leu	Val	Ala	245	250	255	
Leu	Pro	Lys	Ser	Lys	Trp	Met	Asn	Val	Asp	His	Pro	Ile	His	Leu	Gly	260	265	270	
Asp	Glu	Gln	His	Ser	Gln	Tyr	Ser	Lys	Leu	Leu	Leu	Ala	Ser	Lys	Glu	275	280	285	
Gln	Val	Leu	His	Arg	Val	Val	Leu	Glu	Glu	Lys	Val	Ala	Leu	Glu	Gln	290	295	300	
Gln	Leu	Ala	Glu	Glu	Lys	His	Thr	Pro	Glu	Ser	Cys	Phe	Ile	Glu	Ala	305	310	315	320
Ala	Ile	Gln	Glu	Leu	Lys	Thr	Arg	Glu	Glu	Ala	Leu	Ser	Gly	Leu	Ala	325	330	335	



Gly Ser Arg Arg Glu Val Thr Gly Val Val Ala Ala Leu Glu Gln Leu  
340 345 350

Val Leu Met Ala Pro Leu Ala Lys Glu Ser Val Phe Gln Pro Arg Lys  
355 360 365

Gly Val Leu Glu Tyr Leu Ser Ala Phe Asp Glu Glu Thr Thr Glu Val  
370 375 380

Cys Ser Leu Asp Thr Pro Ser Arg Pro Leu Ala Leu Pro Leu Val Glu  
385 390 395 400

Glu Glu Glu Ala Val Ser Glu Pro Glu Pro Glu Gly Leu Pro Glu Ala  
405 410 415

Cys Asp Asp Leu Glu Leu Ala Asp Asp Asn Leu Lys Glu Gly Thr Ile  
420 425 430

Cys Thr Glu Ser Ser Gln Gln Glu Pro Ile Thr Lys Ser Gly Phe Thr  
435 440 445

Arg Leu Ser Ser Ser Pro Cys Tyr Tyr Phe Tyr Gln Ala Glu Asp Gly  
450 455 460

Gln His Met Phe Leu His Pro Val Asn Val Arg Cys Leu Val Arg Glu  
465 470 475 480

Tyr Gly Ser Leu Glu Arg Ser Pro Glu Lys Ile Ser Ala Thr Val Val  
485 490 495

Glu Ile Ala Gly Tyr Ser Met Ser Glu Asp Val Arg Gln Arg His Arg  
500 505 510

Tyr Leu Ser His Leu Pro Leu Thr Cys Glu Phe Ser Ile Cys Glu Leu  
515 520 525

Ala Leu Gln Pro Pro Val Val Ser Lys Glu Thr Leu Glu Met Phe Ser  
530 535 540

Asp Asp Ile Glu Lys Arg Lys Arg Gln Arg Gln Lys Lys Ala Arg Glu  
545 550 555 560

Glu Arg Arg Arg Glu Arg Arg Ile Glu Ile Glu Glu Asn Lys Lys Gln  
565 570 575

Gly Lys Tyr Pro Glu Val His Ile Pro Leu Glu Asn Leu Gln Gln Phe  
580 585 590

Pro Ala Phe Asn Ser Tyr Thr Cys Ser Ser Asp Ser Ala Leu Gly Pro  
595 600 605

Thr Ser Thr Glu Gly His Gly Ala Leu Ser Ile Ser Pro Leu Ser Arg  
610 615 620

Ser Pro Gly Ser His Ala Asp Phe Leu Leu Thr Pro Leu Ser Pro Thr  
625 630 635 640

Ala Ser Gln Gly Ser Pro Ser Phe Cys Val Gly Ser Leu Glu Glu Asp  
645 650 655

Ser Pro Phe Pro Ser Phe Ala Gln Met Leu Arg Val Gly Lys Ala Lys  
660 665 670

Ala Asp Val Trp Pro Lys Thr Ala Pro Lys Lys Asp Glu Asn Ser Leu  
675 680 685

Val Pro Pro Ala Pro Val Asp Ser Asp Gly Glu Ser Asp Asn Ser Asp  
690 695 700

Arg Val Pro Val Pro Ser Phe Gln Asn Ser Phe Ser Gln Ala Ile Glu  
705 710 715 720

Ala Ala Phe Met Lys Leu Asp Thr Pro Ala Thr Ser Asp Pro Leu Ser  
725 730 735

Glu Glu Lys Gly Gly Lys Lys Arg Lys Lys Gln Lys Gln Lys Leu Leu  
740 745 750

Phe Ser Thr Ser Val Val His Thr Lys  
755 760

<210> 36

<211> 42

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 36

Cys Pro Ile Cys Leu Tyr Pro Pro Thr Ala Ala Lys Ile Thr Arg Cys  
1 5 10 15

Gly His Ile Phe Cys Trp Ala Cys Ile Leu His Tyr Leu Ser Leu Ser  
20 25 30

Glu Lys Thr Trp Ser Lys Cys Pro Ile Cys  
35 40

<210> 37  
<211> 41  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 37  
Cys Pro Ile Cys Leu Glu Leu Ile Lys Glu Pro Val Ser Thr Lys Cys  
1 5 10 15

Asp His Ile Phe Cys Lys Phe Cys Met Leu Lys Leu Leu Asn Gln Lys  
20 25 30

Lys Gly Pro Ser Gln Cys Pro Leu Cys  
35 40

<210> 38  
<211> 44  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 38  
Cys Pro Ile Cys Leu Glu Leu Leu Lys Glu Pro Val Ser Ala Asp Cys  
1 5 10 15

Asn His Ser Phe Cys Arg Ala Cys Ile Thr Leu Asn Tyr Glu Ser Asn  
20 25 30

Arg Asn Thr Asp Gly Lys Gly Asn Cys Pro Val Cys  
35 40

<210> 39

<211> 40  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 39  
Cys Ala Phe Cys His Ser Val Leu His Asn Pro His Gln Thr Gly Cys  
1 5 10 15  
Gly His Arg Phe Cys Gln Gln Cys Ile Arg Ser Leu Arg Glu Leu Asn  
20 25 30  
Ser Val Pro Ile Cys Pro Val Asp  
35 40

<210> 40  
<211> 45  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 40  
Cys Pro Ile Cys Met Glu Ser Phe Thr Glu Glu Gln Leu Arg Pro Lys  
1 5 10 15  
Leu Leu His Cys Gly His Thr Ile Cys Arg Gln Cys Leu Glu Lys Leu  
20 25 30  
Leu Ala Ser Ser Ile Asn Gly Val Arg Cys Pro Phe Cys  
35 40 45

<210> 41  
<211> 44  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 41

Cys Pro Arg Cys Lys Thr Thr Lys Tyr Arg Asn Pro Ser Leu Lys Leu  
1 5 10 15

Met Val Asn Val Cys Gly His Thr Leu Cys Glu Ser Cys Val Asp Leu  
20 25 30

Leu Phe Val Arg Gly Ala Gly Asn Cys Pro Glu Cys  
35 40

<210> 42

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 42

Cys Pro Val Cys Leu Gln Tyr Phe Ala Glu Pro Met Met Leu Asp Cys  
1 5 10 15

Gly His Asn Ile Cys Cys Ala Cys Leu Ala Arg Cys Trp Gly Thr Ala  
20 25 30

Glu Thr Asn Val Ser Cys Pro Gln Cys  
35 40

<210> 43

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 43

Cys Val Leu Cys Gly Gly Tyr Phe Ile Asp Ala Thr Thr Ile Ile Glu  
1 5 10 15

Cys Leu His Phe Ser Cys Lys Thr Cys Ile Val Arg Tyr Leu Glu Thr  
20 25 30

Ser Lys Tyr Cys Pro Ile Cys

<210> 44  
<211> 40  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 44  
Cys Ala Ile Cys Leu Asp Glu Tyr Glu Asp Gly Asp Lys Leu Arg Ile  
1 5 10 15  
Leu Pro Cys Ser His Ala Tyr His Cys Lys Cys Val Asp Pro Trp Leu  
20 25 30  
Thr Lys Lys Thr Cys Pro Val Cys  
35 40

<210> 45  
<211> 41  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Peptide

<400> 45  
Cys Thr Ile Cys Tyr Glu Asn Pro Ile Asp Ser Val Leu Tyr Met Cys  
1 5 10 15  
Gly His Met Cys Met Cys Tyr Asp Cys Ala Ile Glu Gln Trp Arg Gly  
20 25 30  
Val Gly Gly Gly Gln Cys Pro Leu Cys  
35 40

<210> 46  
<211> 20  
<212> DNA  
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<220>

<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 46

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20

<210> 47

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 47

aagccccaag cccagagaca agat

24

<210> 48

<211> 253

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 48

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ctggcatggc cctggaaaac tgcgaagtct tctctctgtg caaactttca cctggacttt 120  
ttatatgatt ctggaagtat tccaagaagg caaaagtaaa aactgcaaag cgtcttaaaa 180  
tagaagttca gaagccacat tatatcactt ctgttgcatt ctatcaaagc aagtcacaag 240  
cccctgccaa tca 253

<210> 49

<211> 183

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 49

cacacactcc cccattctga gcccgaagag gctcatccct aaggatgtcc agagatccaa 60  
gtgcagaagg agaatgtggt gaggtatatt attccccag tgccttcct gctgggctat 120  
ggatgaacag tggctgactt catctaggaa agagctatgg cttctgtctc ctggagctca 180  
cca 183

<210> 50  
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Primer

<400> 50  
tgcaaacttt cacctggact t 21

<210> 51  
<211> 24  
<212> DNA  
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Primer

<400> 51  
cttgtgactt gctttgatag aatg 24

<210> 52  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 52  
tgtccagaga tccaagtgca gaagg 25

<210> 53  
<211> 25  
<212> DNA



<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 53

gagctccagg agacagaagc catag

25

<210> 54

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 54

acattgaagc actccgagc

20

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
Primer

<400> 55

agagtggcag caaccaagct

20

Bi  
conc'd